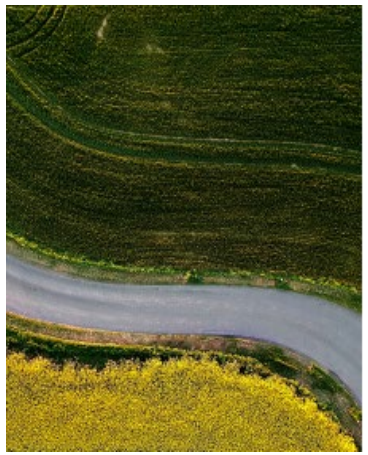
Marine Coastal and Delta Sustainability for Southeast Asia

Co-funded by the Erasmus+ Programme of the European Union

MKAK 1003 : ENVIRONMENTAL MANAGEMENT SUSTAINABILITY
COURSE DEVELOPER : DR. MOHD BADRUDDIN MOHD YUSOF



MKAK1003-01

ENVIRONMENTAL MANAGEMENT SUSTAINABILITY

CHAPTER 1	1.1 Environmental Sustainability
CHAPTER 2	2.1 Environmental issues and problems 2.1.1 Global warming 2.1.2 Water Security
CHAPTER 3	3.1 Classification of natural environmental system 3.1.1 Soil, steep slopes 3.1.2 Lake and lakefront
CHAPTER 4	4.1 Classification of natural environmental system 4.1.1 Rivers 4.1.2 Floodplains 4.1.3 Riverine.
CHAPTER 5	5.1 Classification of natural environmental system 5.1.1 Swamp forest 5.1.2 Wetlands (includes tidal and mudflats wetlands) 5.1.3 Coastline.
CHAPTER 6	6.1 Environmental Sustainable Approaches: Sustainable development goal.
CHAPTER 7	7.1 Integrated river management system
CHAPTER 8	8.1 Water security
CHAPTER 9	9.1 Water footprint
CHAPTER 10	10.1 Life cycle analysis
CHAPTER 11	11.1 Carbon footprint 11.1.1 carbon credit and payment for environmental services
CHAPTER 12	12.1 Green building

PREFACE

This course is a mandatory course with 3 credits (4 ECTS), offered specifically to Master of Engineering (Environmental Management) students; and was developed by Faculty of Civil Engineering, Universiti Teknologi Malaysia.

This course is designed to expose students to various aspects of environmental management and the concept of sustainability. The topics discussed include the principle of sustainability in development, understanding environmentally sensitive areas, particularly natural water bodies, catchment management, and the development of coastal and inland areas. Current issues related to environmental problems, especially climate change and water supply, are the main aspects to be addressed.

Some of the methods and concepts of sustainability approaches are introduced in order to promote and achieve sustainable development goals. At the end of the course, the students should be able to understand the concept of environmental sustainability, present it through an effective communication plan, and incorporate the concept of sustainability in environmental management.

AUTHOR'S BIOGRAPHY

Dr. Mohd Mohd Badruddin Bin Mohd Yusof is an experienced senior lecturer specialising in social, environmental, and urban planning, as well as community development, from the Water and Environmental Engineering Department at Universiti Teknologi Malaysia. With his vast expertise in the fields of environmental (EIA), social impact assessment (SIA), and solid waste management, he has provided the faculty with the needed competitive advantage in a multidisciplinary curriculum offered to students. As a registered Environmental Impact Assessment (EIA) consultant, Dr. Mohd. Badruddin has also been involved with countless major government as well as private development projects in the country since 1998. Being a committed academician, he had been integrating those consultancy experiences into his lectures to provide the students with the exposure they needed to real-life case studies to be applied in their working lives after graduation. Through such an integrated approach, sustainable engineers would be well aware of the importance of sustainability in implementing future projects.

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AUTHOR'S BIOGRAPHY

Dr. Shamila Azman has 21 years of experience in teaching at the Faculty of Civil Engineering, Universiti Teknologi Malaysia. She is involved in environmental management, especially in the field of water quality monitoring and treatment. As a researcher, Dr. Shamila has worked closely with the Ministry of Natural Resources, Environment, and Climate Change on the Malaysia Environmental Performance Index since 2010. She also volunteers for youth and community programmes, especially on issues relating to water management and river restoration activities.

REFERENCES

1. Avlonas, K. and Nassos, G.P. Practical Sustainability Strategies: How to Gain a Competitive Advantage. John Wiley Publisher. 2013.
2. Biswas, A.K. and Tortajada, C. Water Security, Climate Change and Sustainable Development. Springer. 2016 Brinkmann, R. Introduction to Sustainability. Wiley Blackwell. 2016
3. Gannmon, P. Introduction to Energy, Environment and Sustainability, Kendall Hunt Publishing Company. 2013
4. Kerr, J.A. Introduction to Energy and Climate: Developing a Sustainable Environment. CRC Tailor and Francis Group. 2017.
5. Klopffer, W. and Grahl, B. Life cycle assessment (LCA). A guide to the best practice. John Wiley Publisher. 2014
6. Mehta, L. and Movik, Synne. Liquid Dynamics: Challenges for Sustainability in the Water Domain. Wiley Interdisciplinary Reviews: Water. Volume 1, Issue 4, Pages: 369–384, DOI: 10.1002/wat2.1031. 2014.
7. Theis, T. and Tomkin, J. Sustainability: A Comprehensive Foundation. http://cnx.org/content/col11325/1.38/ >2012 Wheater, H.S. and Gober, P. Water security and the science agenda. Agu Publication.10.1002/2015WR016892 2015